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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,055	03/19/2004	Matthew R. Sivik	3246	7978

26645 7590 01/13/2009

THE LUBRIZOL CORPORATION
ATTN: DOCKET CLERK, PATENT DEPT.
29400 LAKELAND BLVD.
WICKLIFFE, OH 44092

EXAMINER	
LANG, AMY T	

ART UNIT	PAPER NUMBER
3731	

MAIL DATE	DELIVERY MODE
01/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/805,055	SIVIK ET AL.	
	Examiner	Art Unit	
	AMY T. LANG	3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-8 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tipton (US 5,354,485) in view of Lange (US 6,258,761).

With regard to **claims 1-4 and 8**, Tipton discloses a grease composition comprising an esterified polymer, a thickening agent, and an oil of lubricating viscosity (see entire document). The composition comprises an esterified maleic anhydride-styrene copolymer, which clearly overlaps the instant claims (column 21, lines 19-28. Although Tipton does not specifically disclose the wt% of the polymer in the composition, Tipton teaches 1 wt% of a post-treated esterified maleic anhydride-styrene copolymer in Example IX (column 23, lines 23-26). Since the post-treated polymer is merely expressed in an example, it would have been obvious to one of ordinary skill in

the art at the time of the invention for the esterified maleic anhydride-styrene copolymer to also be utilized at 1 wt%.

Furthermore, Example IX only teaches a lubricant composition. However, Tipton discloses that thickening agents are added to the lubricant composition to produce grease (column 23, lines 55-65). The disclosed thickeners include hydroxystearic acid, which overlaps the instantly claimed metal salt of a carboxylic acid (column 23, line 66 through column 24, line 9). Other thickening agents include clay, specifically bentonite (column 24, lines 10-24).

Tipton is silent regarding the total acid number (TAN) of the esterified polymer. Lange discloses a lubricating composition comprising an esterified maleic anhydride-styrene copolymer with specific TAN values of 15 and 12.2 (column 1, lines 4-7; column 8, lines 56-53; Example A-1 and Example A-1, column 15). Since Tipton discloses a lubricating composition, wherein a thickening agent is added to produce the grease, with an esterified maleic anhydride-styrene copolymer and Lange also teaches a lubricating composition with an esterified maleic anhydride-styrene copolymer having a specific TAN value, it would have been obvious to one of ordinary skill at the time of the invention for the polymer of Tipton to also have a TAN value as taught by Lange.

Although Tipton in view of Lange does not specifically disclose the water wash off properties of the produced grease composition, it is the examiner's position that the composition would intrinsically comprise these properties since it overlaps the instant claims.

With regard to **claim 5**, since Tipton specifically discloses an esterified polymer, it would have been obvious to one of ordinary skill at the time of the invention for almost all the maleic anhydrides, about 99.5%, to be converted to ester groups.

With regard to **claims 6 and 7**, Tipton discloses the polymer esterified with C_{8-18} and C_4 alcohols, which clearly overlaps the instant claims (column 23, lines 23-26).

With regard to **claim 11**, since Tipton discloses an esterified copolymer derived from monomers of styrene and maleic anhydride, the method steps of mixing the two components to form a polymer, reacting the polymer with two alcohols, and adding the final product to lubricating oil with a thickening agent is intrinsically met. However, if applicant were to argue that Tipton does not disclose mixing the two components with a solvent, Lange also discloses a method to produce the esterified copolymer wherein a solvent is specifically utilized (column 13, lines 4-20).

Response to Arguments

4. Applicant's arguments filed 10/29/2008 have been fully considered but they are not persuasive.

Specifically, applicant argues (A) that Tipton's reference to a grease is in a separate embodiment so that there is no teaching to use the esterified maleic anhydride stryene copolymer in the grease composition.

With respect to argument (A), Tipton specifically teaches using 1 wt% of the esterified maleic anhydride stryene copolymer in a lubricant composition (Example IX, column 23). These copolymers are disclosed as additives in the composition (column

20, line 41 through column 21, line 28). Additionally, Tipton specifically teaches the disclosed lubricant is used to form grease (column 23, lines 56-57). Therefore, the same lubricant is used to form the grease. Although Tipton does not specifically disclose a grease composition comprising 1 wt% of the esterified maleic anhydride stryene copolymer, since this copolymer is used in a lubricant and the lubricants of Tipton are used to form grease compositions, it would have been obvious for a grease composition to comprise the copolymer. Additionally, since the copolymer is disclosed as an additive, it would have also been obvious to incorporate the additive into a grease composition for its beneficial dispersant abilities (column 21, lines 19-20).

Specifically, applicant argues (B) that the resultant copolymer products of Lange comprise TAN values of less than 4.

With respect to argument (B), as shown in Examples A-1 and A-2, the "intermediate" copolymers of Lange comprise a TAN value of greater than 4. It is these intermediate copolymers that are very similar to the copolymer disclosed by Tipton. The intermediate products of Lange are then further reacted with a hydrocarbyl substituted carboxylic to form a final product and the TAN value is then lowered to less than 4. However, it is the TAN value of the intermediate product, not the final product that is used for obviousness. Therefore, Tipton in view of Lange does teach an esterified maleic anhydride stryene copolymer where it is obvious for the TAN to be greater than 4.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY T. LANG whose telephone number is (571)272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/07/2009
/Amy T Lang/
Examiner, Art Unit 3731

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3731